

IN THE CLAIMS

Claim 1 (currently amended): A method of generating a waveform having a constant level periodically and a plurality of different levels in other durations, said method comprising:

receiving a first input signal having said constant level and a second ramp signal having said plurality of different levels in other durations; and

selecting said first input signal periodically and said second ramp signal in said other durations to generate said waveform.

Claim 2 (original): The method of claim 1, wherein said first input signal is selected in alternative durations, wherein said alternative durations and corresponding ones of said other durations are contiguous such that said wave form is also continuous in time domain.

Claim 3 (currently amended): The method of claim 2, wherein said second ramp signal comprises a data signal, and wherein said waveform comprises a CCD waveform.

Claim 4 (original): The method of claim 3, wherein said CCD waveform is used to test a CDS (correlated double sampling) sampler at a high frequency.

Claim 5 (currently amended): An apparatus for generating a waveform having a constant level periodically and a plurality of different levels in other durations, said apparatus comprising:

means for receiving a first input signal having said constant level and a ~~second~~ ramp signal having said plurality of different levels in other durations; and
means for selecting said first input signal periodically and said ~~second~~ ramp signal in said other durations to generate said waveform.

Claim 6 (original): The apparatus of claim 5, wherein said first input signal is selected in alternative durations, wherein said alternative durations and corresponding ones of said other durations are contiguous such that said wave form is also continuous in time domain.

Claim 7 (original): The apparatus of claim 6, wherein said second signal comprises a data signal, and wherein said waveform comprises a CCD waveform.

Claim 8 (original): The apparatus of claim 7, wherein said CCD waveform is used to test a CDS (correlated double sampling) sampler at a high frequency.

Claim 9 (currently amended): A waveform generator for generating a waveform having a constant level periodically and a plurality of different levels in other durations, said waveform generator comprising:

a multiplexor receiving a first input signal having said constant level and a ~~second~~ ramp signal having said plurality of different levels in other durations, said multiplexor selecting said first input signal periodically and said second signal in said other durations to generate said waveform.

Claim 10 (original): The waveform generator of claim 9, wherein said first input signal is selected in alternative durations, wherein said alternative durations and corresponding ones of said other durations are contiguous such that said wave form is also continuous in time domain.

Claim 11 (currently amended): The waveform generator of claim 10, wherein said ~~second~~ ramp signal comprises a data signal, and wherein said waveform comprises a CCD waveform.

Claim 12 (original): The waveform generator of claim 11, wherein said CCD waveform is used to test a CDS (correlated double sampling) sampler at a high frequency.

Claim 13 (original): The waveform generator of claim 12, wherein said high frequency corresponds to a period of less than 30 nano-seconds for said CCD waveform.

Claim 14 (currently amended): The waveform generator of claim 9, wherein said multiplexor comprises a first switch and a second switch respectively coupled to receive said first input signal and said ~~second~~ ramp input signal, said first switch being operated to be in a closed state periodically and said second switch being operated to be in said closed state in said other durations.

Claim 15 (original): The waveform generator of claim 14, wherein each of said first switch and said second switch is implemented using a respective core transistor having a low breakdown voltage and high speed.